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W I S S E R A N D C O X

geologists - engineers

55 new montgomery

san francisco, california

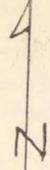
YU2-1436

Report on the
ITALIAN MINE
Amador County, California

November 16, 1959

Plymouth

Plymouth Mine. Production: \$20,000,000 (Au @ \$35/oz.)
Average Grade: \$11⁹⁰/ton (" ")



Snakebite
Bruce
Forty-nine

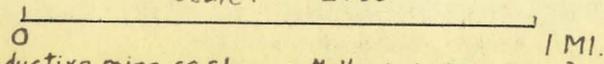
N Hercules
N Henry Clay
N Providence
N Joe Davis
N Cosmopolitan

World
California
Maryland
Chili Jim
Pocahontas
Homestead
Cooter

Mariposa Slate
Greenstone

Drytown

MOTHER LODE BETWEEN
PLYMOUTH CONSOLIDATED AND FREMONT MINES
AMADOR CO., CALIF.
Scale: 1" = 2000'



Productive mine as shown on Mother Lode Folio (1900): X
Claims under lease & option to Brink & Wylie:

Mariposa Slate
Loyal Lode
N Gores
Evermore

Fremont Mine
Production: \$9,300,000
Ave. Grade (later years)
\$8⁵⁰/Ton

ITALIAN

ITALIAN MINE, AMADOR COUNTY, CALIFORNIAINTRODUCTION

The mine was examined on November 7, 1959 at the request of Mr Joseph Hoffman and associates of Detroit, Michigan, in order to determine whether further exploration, at reasonable cost, might expose enough ore to put the mine into production. As I understand it, this group had put up about \$2000 for the diamond drilling described below and it is the contention of Messrs. Brink and Wylie, who control the property, that an additional \$18,000, properly expended, would make the mine a producer.

Accessible portions of the adit or main level were examined in the morning, and the geology mapped in reconnaissance fashion. The mill was inspected in the afternoon and notes taken on results of drilling, history of the mine, deals involved, etc.

It is unfortunate that the drill core was not preserved in core boxes and that no written records, except assay results, apparently exist of the drilling. The collars of all three holes were seen underground so that the approximate direction and inclination of the holes could be checked, but the positions in Holes 2 and 3 of the gold-bearing intercepts were given me verbally by Mr. Brink and are therefore subject to greater error than where taken from carefully posted drill logs.

Mr. Brink accompanied me throughout the day and gave all possible assistance. Mr. Adair of Stockton, who is quite familiar with the mine, was present and gave valuable information, as well as the loan of an unsigned report on the mine written in 1936.

After my return from the mine, all available literature concerning it and adjoining Mother Lode properties was consulted.

LOCATION

As shown on the map facing this page, the Italian mine, in the northern segment of the Mother Lode gold belt, lies one mile east of Drytown (which is on California paved highway #49), and is connected with Drytown by a gravel road. There are almost no grades on this access road, but the area of the mine is steeply hilly.

PROPERTY DEALS

Italian Claim. This claim, only 300 x 300 feet (about 2 acres) is owned by the Black Hills Mining Company, a corporation controlled by W. D. Tam of Jackson, Amador County. Messrs. Brink and Wylie hold a lease from this company, with option to purchase. Until the mine comes into production, the lease and option are kept valid by putting in 20 shifts per month in the mine, or by paying \$200 per month. After production begins, the royalty is 12% of net smelter returns. The purchase price is \$200,000 payable out of the royalty if the option is exercised. Otherwise, the lease remains in force indefinitely.

Peerless, Coulter and Homestead Claims. (See map). These appear to be jointly owned by the Hobart and Emma Rosa estates. Messrs. Brink and Wylie hold a lease on these claims with option to purchase. Under the lease, before production begins, 20 shifts per month must be put in, or \$50 per month paid; after production starts, royalty is to be 10% of net smelter returns. Purchase price is \$50,000, payable also out of royalty, but there are set dates for payment:

At end of 5 years -----	\$5,000
At end of 10 years -----	10,000
At end of 15 years -----	35,000

Neither of these deals is objectionable from any standpoint.

RELATION OF THE CLAIMS TO PRODUCTIVE MINES

Although mining in this part of the Mother Lode started over 100 years ago, none of the claims held has had any appreciable production. The following data are taken from Bulletin 108 (1934) California Division of Mines: "Mother Lode Gold Belt of California", p.81-83 and 111.

The Peerless, Coulter and Homestake claims formerly belonged to the Seaton Mining Company. Prior to 1868, an inclined shaft had reached a depth of 500 feet; 10,000 tons of ore had been mined with an average grade of \$15 per ton (based on present gold price of \$35 per ounce, for comparison with present day conditions). The mine lay idle for many years, but the shaft was finally deepened to 950 feet on the incline and the vein drifted on for 600 feet. Another shaft was sunk 500 feet. There is no record of further production. The total production of \$150,000 is insignificant, considering the extensive exploration conducted.

The Italian mine in the 1860's had a 6-stamp mill, which crushed about 2000 tons of ore from surface workings. The mine lay idle until 1890 when a crosscut adit was driven; little or no production resulted. In 1932 the present main adit level was started from the Peerless adit (see map of adit level). Some ore was found. According to an unsigned report of 1936, the Black Hills Mining Company built a 5-stamp mill in 1935; drifting and crosscutting disclosed several small lenses of fairly high grade ore. Apparently ore from the "Flat" stope or the "Big Stope" was mined at this time and treated in the stamp mill. According to Messrs. Brink and Adair, a small lense of extremely high grade ore was found on the adit level (Pt. A of adit level map). The miners stole most of this according to report. A winze, shown on the map, was sunk below the adit level, and at a depth of 50 feet a drift was run south to get under this ore and the "gray" ore body east of it. Downward continuations of these ore bodies were not found, but since no map exists of this 50 foot level, it is impossible to say whether this exploration was intelligently directed.

The present 100-ton flotation mill, built by the Black Hills Company, ran only about 3 months, in 1953-54, and was used more for sampling than as a commercial mill.

I estimate the total production of the Italian mine at not over 10,000 tons; if the ore averaged \$20 per ton, total production would be \$200,000.

The other claims shown on the Mother Lode map, between the Plymouth mine on the north and the Fremont mine on the south, were not very productive either, and most of them have been pretty well explored. Thus, there is a 750' shaft on the Cosmopolitan claim, from which long drifts were run; there is no record of production. On the Pocahontas claim there is a 625' shaft with 5 levels off it and long drifts and crosscuts; production was very small.

South of the Italian mine, the Loyal Lode had a small early-day production and the Gover made a yearly output of about \$100,000 in the late 1880's and early 1890's, but the important producer was the Fremont, which lies about 3000 feet south of the Italian mine.

Thus the Italian mine lies within a relatively barren segment of the Mother Lode.

ECONOMICS OF MOTHER LODE MINING

The Mother Lode was always a low grade, low cost producer. Mining started to decline after 1914. In terms of the 1914 dollar, and the then price of gold, \$20.67 per ounce, the grade of ore mined, year and year out, ran from

\$4 per ton or less, to about \$10, but miners were paid \$3-\$4 per day and other costs were in proportion. In 1933 the price of gold was raised 70% (from \$20.67 to \$35 per ounce), but wages since 1914 increased over 400%. This accounts for the virtual cessation of mining on the Lode today.

I estimate that mining at the rate of 100 tons per day would need ore worth \$18-\$20 per ton to break even. Such ore is scarce anywhere.

GEOLOGY OF THE ITALIAN MINE (Refer to Geologic Map, Adit Level)

Productive Mother Lode mines almost invariably show well-defined veins, most of which dip eastward at about 60°. Many of these veins are along faults, and carry gouge along one or both walls. This is not the condition at the Italian mine.

The chief structural feature at the mine is the contact between the Mariposa slate on the west, and quartz or greenstone on the east, as shown on the map. The contact strikes roughly north and dips steeply east; this is the attitude of most Mother Lode veins and faults in this area. But the contact shows little evidence of faulting.

East of the contact large masses of quartz occur which appear to have been formed entirely in the greenstone. Most of this quartz is massive, white and undoubtedly very low-grade. Where the massive quartz has been fractured and the fractures healed with sulfides and later quartz, it is probably high in gold. This is the appearance of most of the small stopes shown on the map. These quartz masses all seem to lie nearly flat, or with gentle dip to the east or southeast. In this they differ from normal Mother Lode quartz bodies, which normally dip eastward steeply.

Ore bodies are confined to relatively small lenses, most of which were flat lying, but one of which, mined in the "Big" stope, may have a steep dip more ~~constant~~ ^{consistent} with Mother Lode habits of ore occurrence.

RESULTS OF DIAMOND DRILLING

Hole No. 1: This was to test the intersection of an east-west vein in the Peerless claim (north of the area shown on the map) with the Mother Lode. Drilling difficulties forced abandonment of the hole after a depth of 70 feet had been reached.

Hole No. 2: (see map and vertical section) This was to search for the downward extensions of the "gray" ore and "high-grade" ore found on the adit level. Such extensions were not found (as proven by Hole 3) but ore of attractive grade was cut at and near the slate-greenstone contact.

Hole No. 3: This hole sought to find a moderate extension in depth of the adit level ore bodies; it failed in this also, but did find gold of sub-commercial grade out in the slate.

CURRENTLY PROPOSED PLAN OF EXPLORATION

Mr. Brink desires to place the winze in operation again by rebuilding the headframe, cleaning up the hoist and motor etc., and unwatering the winze and the 50-foot level driven from it. To do this, caved portions of the workings leading to the winze must be shored up. He estimates the cost of doing this at about \$10,000; with this I agree. He then wished to drive the 50-foot level under the high grade and "gray" ore bodies, in spite of the fact that two drill holes failed to find downward extensions of these ore bodies, and in spite of the fact that the best description I could get of the 50-foot level suggests that the level is already out under these ore bodies. He is especially intrigued by a reported find of a very high-grade ore in a small sump on the 50-foot level very close to the winze.

As I understand it, Mr. Brink believes that for a total of about \$18,000 the mine can be brought into production at the rate of 100 tons per day, the capacity of the mill.

COMMENTS ON THE PROPOSED PLAN

No Mother Lode mine today may be expected to make money operating at a rate much less than 100 tons per day, on account of the relatively low grade of the ore. No mining operation is worth considering where the life, as defined by the ore available, is less than three or four years. A 100-ton mill requires about 35,000 tons of ore per year, over three times the amount of ore ever found in the Italian mine. Clearly, the small ore bodies which are the objectives of the proposed exploration, are entirely inadequate for the needs of the mill, even if these ore bodies exist on the 50-foot level, which I doubt. I feel, therefore, that the proposed unwatering of the winze and driving on the 50-foot level is not a feasible plan, and recommend that your group put no money into the Italian mine so long as this scheme is retained.

CONCLUSIONS

The ore cut near the bottom of Hole No. 2, which averages over \$20 per ton over a width of 30 feet, cannot be dismissed lightly in view of the fact that the property is equipped with compressors and other mining machinery, and a mill which probably could not be replaced for \$100,000. Such ore approaches the grade which would yield a profit even today if there is enough of it; the mine might yet turn out to be a profitable venture.

This ore is not the downward extension of any ore body known on the adit level; but it may be the downward extension of the sub-grade ore cut near the bottom of Hole No. 3 (see vertical section). If so, the vein, for such this seems to be, is low-grade in the shale, away from the greenstone contact, but on reaching the contact with depth, the grade improves radically. This is typical of Mother Lode productive veins. Most ore bodies in this segment of the Lode made at or near the slate-greenstone contact.

Unfortunately, the ore showing in Hole No. 2 lies 200 feet below the adit level; it would take real money to sink to that level and explore the vein there. Obviously, further diamond drilling is indicated to establish the size and shape of the ore body, as a form of insurance that the heavy cost of sinking and drifting would be justified. If it should be demonstrated by drilling that the ore body has a horizontal length of 200 feet and a width of 30 feet, then if ore extended 50 feet above the 200 level, 24,000 tons of ore would exist, enough to run the mill a year at 75 tons per day.

RECOMMENDATIONS

I cannot advise your group whether or not to embark on a speculative mining venture. In this case the risks are great, but the possible returns, should the venture prove successful, might be correspondingly high. The following proposed scheme of exploration has at least the advantage of a graduated risk, i.e. if at any stage of exploration results are disappointing, the entire project may be dropped at no further expense.

Diamond Drilling

Hole A. Bearing N80°W. Inclination -46°. Length 300 feet

This hole would test the supposed vein at the 200 ft. elevation, 100 feet north of the ore showing in Hole No. 2. It would also pass under the body of quartz which contained the Adair stope, and test the continuation of this body in depth.

Hole B. Bearing S65°W. Inclination -46°. Length 300 feet

This hole would explore the supposed vein 100 feet south of the ore showing in Hole No. 2 at the 200 ft. elevation. It would also pass under the "Big" stope, which is said to have ore in the floor and which seems to have a better chance for extension in depth than the other known ore lenses.

The core from these holes should not be treated like that from the three holes drilled: scattered all over the shop and no written record kept. The core should be preserved in core boxes, vein material should be split for assay, and one half retained for a check.

This drilling would cost \$6000-\$7000. If neither hole showed ore, the project should probably be abandoned. If one showed ore, but not the other, a third hole might be indicated to cut the vein north or south, as the case may be, of the new hole which shoed ore.

Underground Exploration

This would be the next step if the drilling indicated sizeable ore; but at this stage it might be possible, and desirable, for your group to turn the venture over to an experienced mining company, for a substantial interest, and let that company assume the heavier financial risk of underground exploration. The work involved, and the approximate cost would be as follows (see Map of Adit Level):

Retimbering on adit level; building new headframe rehabilitating hoist and motor, unwatering winze and 50 ft. level -----	\$10,000
Sinking winze to 200 ft. level (bottom now at 65') 135 ft. @\$75 per ft. -----	10,000
Crosscut to ore showing in Hole #2; drifting 200 feet on the vein; possibly crosscut to get under "Big" stope, with drift, 600 ft. @\$30 -----	18,000
Miscellaneous expense -----	5,000
	<u>\$43,000</u>

General

The great advantage of a venture at the Italian mine is the presence of mining machinery and the mill; so far as I know, this is the only mine on the Mother Lode ready to go into production once ore is found. If I were employed by a mining company, I would recommend the drilling outlined above. I have no means of knowing whether this would be a speculation suitable for your group.

Respectfully submitted,

Edward Wisser

Edward Wisser

San Francisco, California
November 15, 1959